

RTX REVIEW 2/28/91
AGENDA ITEMS

1. MODULE STATUS
2. HEATER FIXTURE STATUS
3. ASSEMBLY FIXTURE STATUS
4. DOCUMENTATION PACKAGE
5. TOOLING & VENDOR RELEASE
6. PATENT & LICENSE POSITION UPDATE
7. POTENTIAL FUTURE DEVELOPMENT AGREEMENTS
8. CONCEPT & DESIGN IDEAS FOR FUTURE PHASES

Printing
Stens
6 chr pins
battery covers
housing parts
Cu thickness flex circuit
board temp links
sleeve our responsibility

ED 2/29/91

2020126002

RTX
HEATER FIXTURE - DEVELOPMENT MILESTONES

CUSTOMER PURCHASE ORDER ISSUE		12/20 •
REVIEW & GO AHEAD BY CUSTOMER		12/27 •
PIN HOUSINGS	-	DRAWINGS TO TOOL MAKER 12/28 •
		TOOL READY FOR REVIEW 3/ 7
		FIRST PARTS OF TOOL (26) 3/11
		EVALUATION 3/13
		(1000) SETS OF PARTS 3/18
		(4000) SETS OF PARTS 4/ 1
		(5000) SETS OF PARTS 4/15
DISK CONTACT	-	DRAWING TO TOOL MAKER 1/11 •
		(1000) PARTS 2/25 •
		EVALUATION & TEST 2/27 — by 3/8
		(5000) PARTS 3/11 — w/ ship center post 16
		(5000) PARTS 3/18
CONDUCTOR PIN	-	DRAWING RELEASE 1/11 •
		(200) SAMPLES 2/ 1 •
		EVALUATION & TEST 2/27
		(10000) PARTS 3/11
CARDB TUBE I	-	DESIGN RELEASE 1/15 •
		(50) SAMPLES 1/22 •
O	-	DESIGN RELEASE 1/18 •
		(50) SAMPLES 2/ 4 •
LOAD RESISTOR	-	(200) SAMPLES 2/20 — coated > (90)
SLEEVE & SEAL	-	DESIGN RELEASE TBD
		(100) PARTS TBD
ASSY FIXT. F	-	DES/DRW RELEASE 1/23 •
		QUOTES REC 2/11 •
		ORDER REL 2/11 •
		(1) COMPLETE FIXT. 3/ 8
		(2) 3/25
ASSY FIXT R	-	DES/DRW RELEASE 1/23 •
		QUOTES REC 2/11 •
		ORDER REL 2/11 •
		(1) COMPLETE FIXT. 3/ 8
		(2) 3/25
ASSY FIXT M	-	DES/DRW RELEASE 2/22 •
		QUOTES REC 2/27
		ORDER REL 3/ 1
		(1) COMPLETE FIXT. 3/29
		(1) 4/12
		(1) 4/26
BUILD PLAN	-	3/ 4
DELIVER (1000) SUBASSEMBLIES TO CUSTOMER		4/10
DELIVER (4000) SUBASSEMBLIES TO CUSTOMER		4/24
DELIVER (5000) SETS OF PARTS TO CUSTOMER		4/30

EB/JB 12/21,1/8,1/18,2/11,2/26

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PHASE 1 DOCUMENTATION

PHASE 1 PROTOTYPE MODULE

1. PARTS/MATERIAL LIST with PART NUMBERS
2. VENDOR LIST with ADDRESS & PHONE NUMBERS
3. SCHEMATIC , HEATER CONTROL CIRCUIT
4. SCHEMATIC , PRESSURE SWITCH CIRCUIT
5. DRAWINGS for CUSTOM DESIGNED PARTS

LAYOUT , MODULE
HOUSING BOTTOM , CASE
HOUSING TOP , COVER
HOUSING , DETAIL (3)
HOUSING , REWORK
DOOR , BUTTON CELLS
BEZEL , LCD
FLEX CIRCUIT (4)
CONNECTOR , LOAD
ELASTOMERIC , ZEBRA STRIP
LCD DISPLAY

6. SPECIFICATION for COMMERCIAL PARTS/MATERIALS

CRYSTAL , 4 MHz
FET DIE , TRANSISTOR REFERENCE
CHIP RESISTORS
CHIP CAPACITORS
FUSE , 5 AMP FAST
VOLTAGE DETECTOR
ADHESIVE SEALANT RTV T 95 , CAN/HSNG TOP
ADHESIVE SEALANT SYLG.577 , CAN/HSNG BASE
FET DIE COATING , SIMICOSIL 900 T

7. PRESSURE SWITCH ASSEMBLY DRAWING & PARTS LIST
PRT SENSOR SPECIFICATION for REFERENCE

only one used in 1st 50

Motorola could possibly provide 100

ASSEMBLY & TEST FIXTURES

1. DRAWINGS / SKETCHES

FLEX CIRCUIT , CONNECTOR SOLDER FIXT. SK101790
LOAD SIMULATOR FIXT. CONNECTING PLUG
FLEX CIRCUIT ASSEMBLY TEST FIXT. (2) SK1019
ASSEMBLY TEST , PROBE FIXTURE SK0225
LOAD CONNECTOR , PIN INSERTION FIXT.

BATTERY CHARGER : *able to purchased from Motorola*

1. SPEC./DESCRIPTION , MOTOROLA P 100 MODEL NTN 5540
2. SCHEMATIC , MODIFIED CIRCUIT for 14 HOUR RECHARGE
3. DRAWINGS for CUSTOM DESIGNED ADAPTOR & REWORK
PLASTIC ADAPTOR (2) MHC 1519 & 1519
REWORK DRAWING (2) MHC 1517 & 2916

*15 min charger
in Development
1" x 3" x 4" @ this
stage
miniaturized
current sens*

CD 2/20/91

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5. TOOLING & VENDOR RELEASE

MODULE HOUSING TOP

HOUSING BOTTOM

HOUSING BATTERY COVER

CONNECTOR HOUSING

FLEX CIRCUIT

SENSOR SUBSTRATE *Motorola*

LCD

LCD FRAME

HEATER CONTACT HOUSING

DISK CONTACT

CONDUCTOR PIN

ASSEMBLY FIXTURES F,R,M

Load detection: joint development?

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7. POTENTIAL FUTURE DEVELOPMENT ACTIVITIES

CUSTOM BATTERY PACK *development of custom Ni/Cd*
CUSTOM IC *Renkier, Lucas*
CUSTOM FET
CUSTOM SENSOR
CUSTOM SENSOR ASSEMBLY

SPS

AEIG

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EB 2/26/91

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8. CONCEPT & DESIGN IDEAS FOR FUTURE PHASES

MODULE PACKAGING PHASE 2,3,4

SINGLE COMPONENT SUBSTRATE

SEALED HOUSING

CONNECTOR SCHEME

SINGLE BATTERY

CUSTOM IC

FET ARRANGEMENT

CUSTOM FET ARRAY

DUAL/SINGLE FET

HEATER PACKAGING FOR MANUFACTURABILITY

CURRENT REDUCTION

RESISTOR PRINTING

PAPER BASE

CERAMIC STRUCTURE

METALLIZED CONTACTS

CONNECTOR SCHEME

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